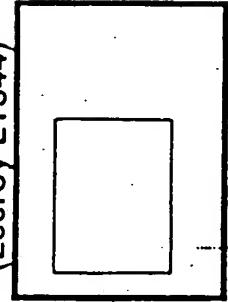
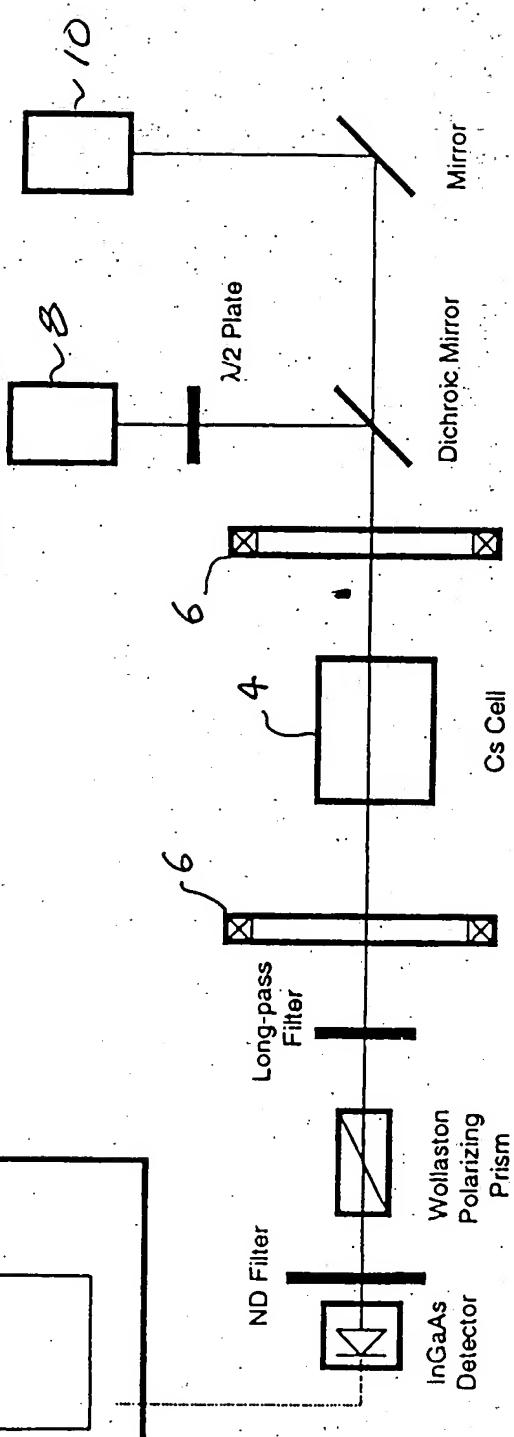


Dual Oscilloscope
(Lecroy LT344)



852 nm Pump Laser
(SDL 5722-H1)
705 UNTEST

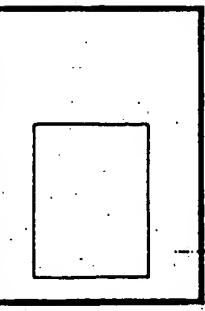
Tunable (1446-1557 nm)
Characterization Laser
(New Focus Velocity 6326)



Magnetic Ring
(Dexter Permag PP96-1213-1)
Magnetic Ring
(Dexter Permag PP96-1213-1)

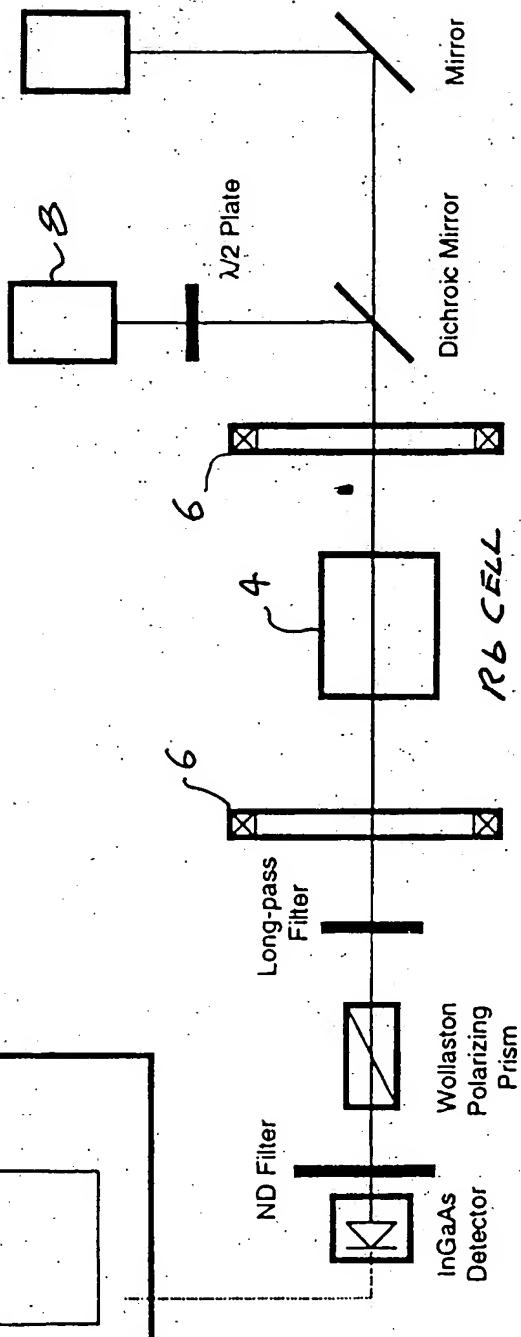
FIG. 1A

Dual Oscilloscope
(LeCroy LT344)



780 nm PUMP LASER
NEW FOCUS
VORTEX 6013

Tunable (1446-1557 nm)
Characterization Laser
(New Focus Velocity 6326)



Magnetic Ring
(Dexter Permag PP96-1213-1) (Dexter Permag PP96-1213-1)

FIG. 1B

Pump Laser Wavelength / Power: 852.112 nm ($6^2S_{1/2} - 6^2P_{3/2}$) / ~10 W/cm²
Cs Cell Temperature / Length: 120 C° / 1 cm
Magnetic Field: 80 Gauss

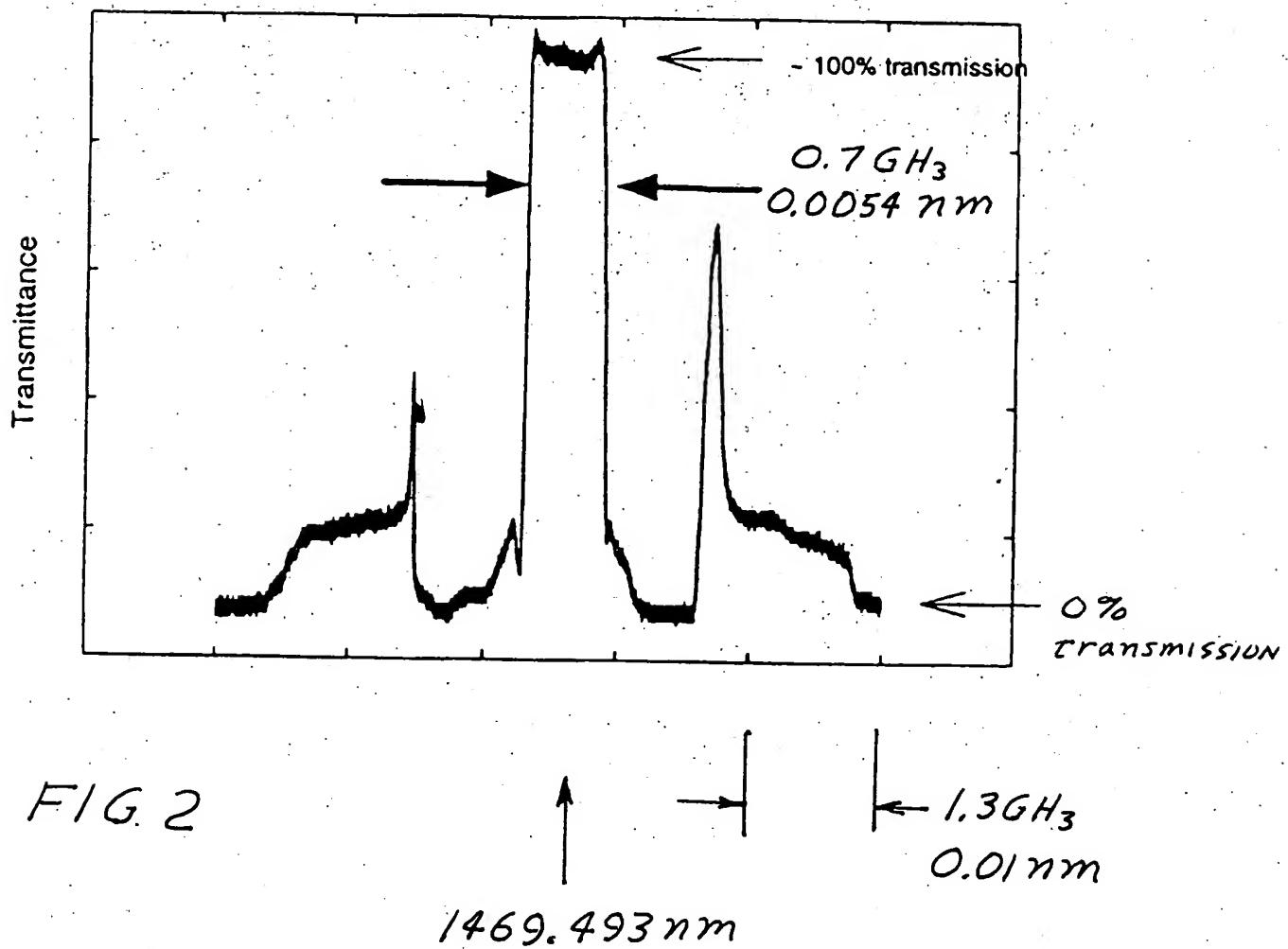


FIG 2

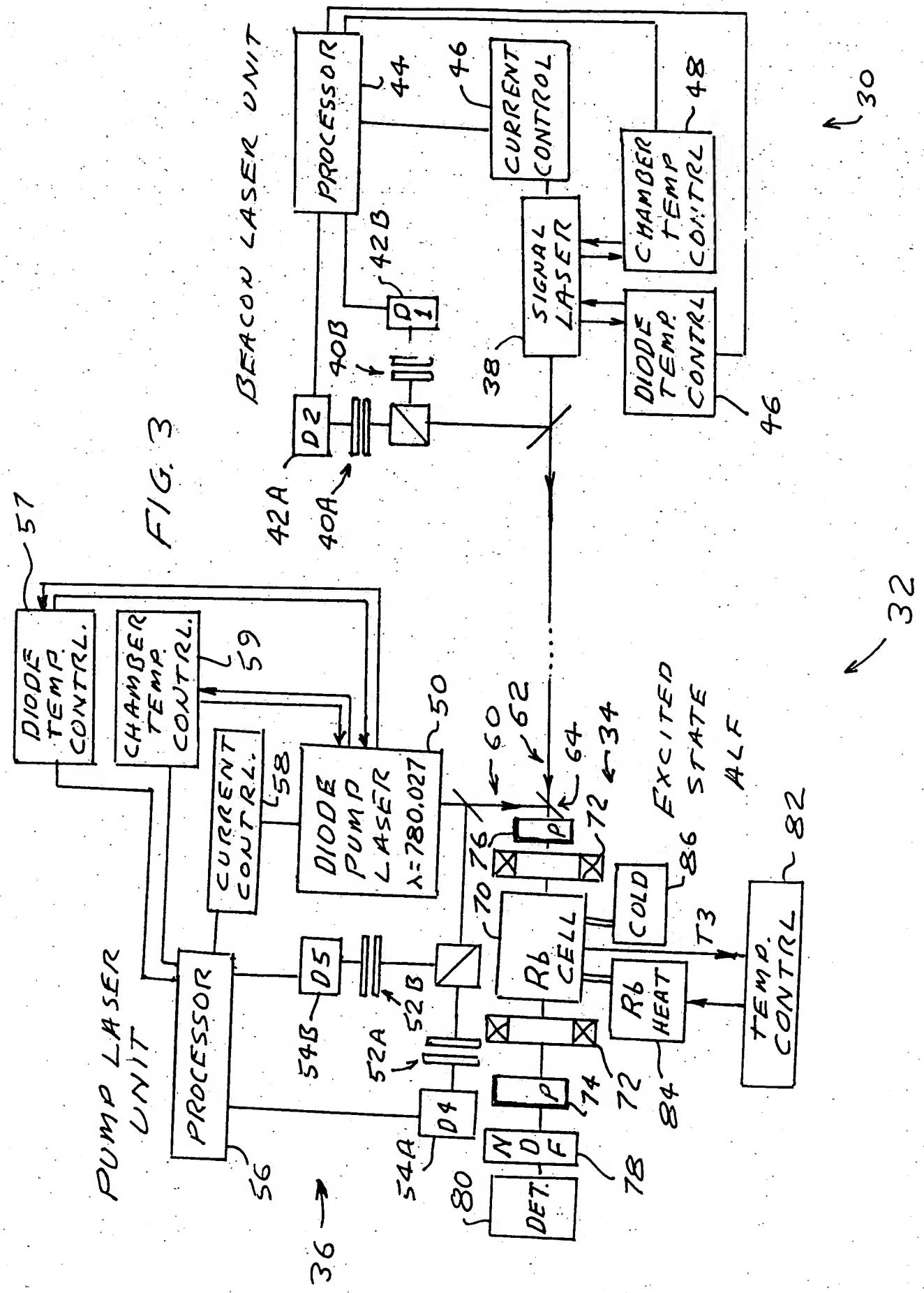


FIG. 3A

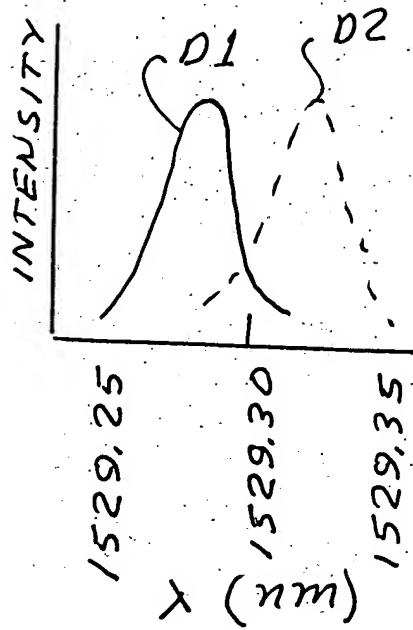


FIG. 3B

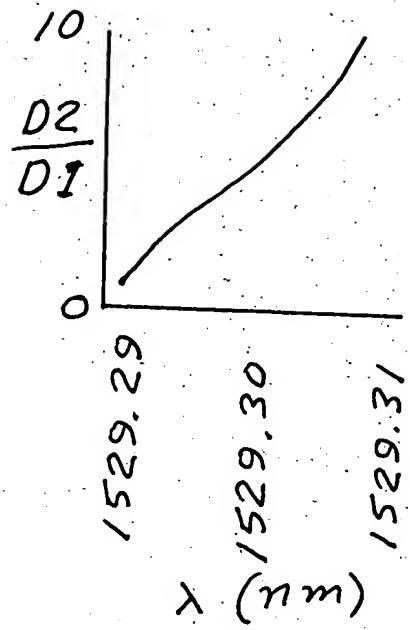


FIG. 3C

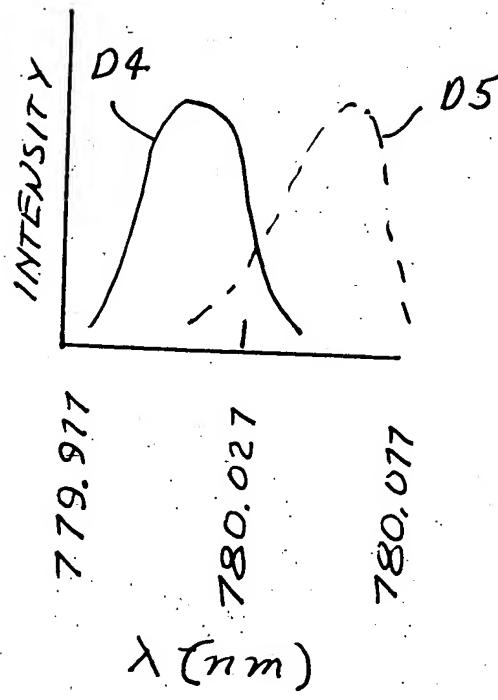
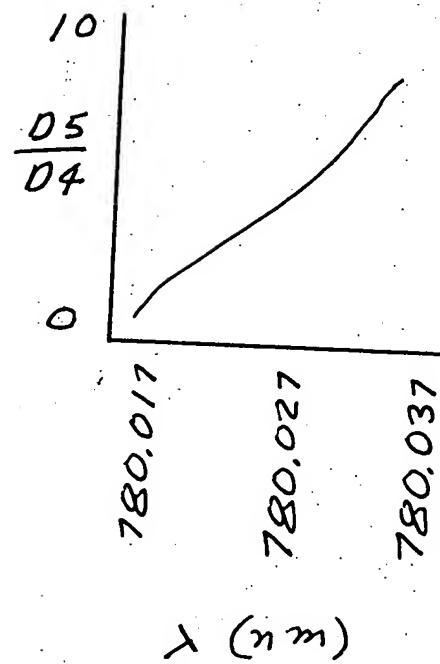


FIG. 3D



TRANSMISSION

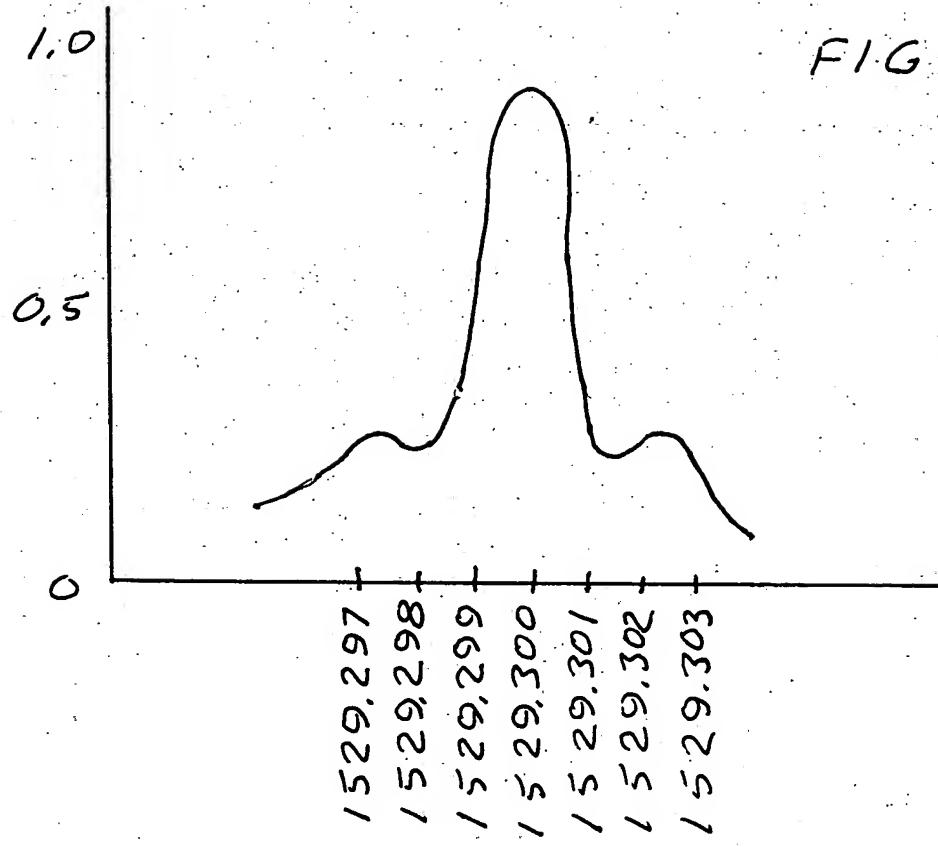
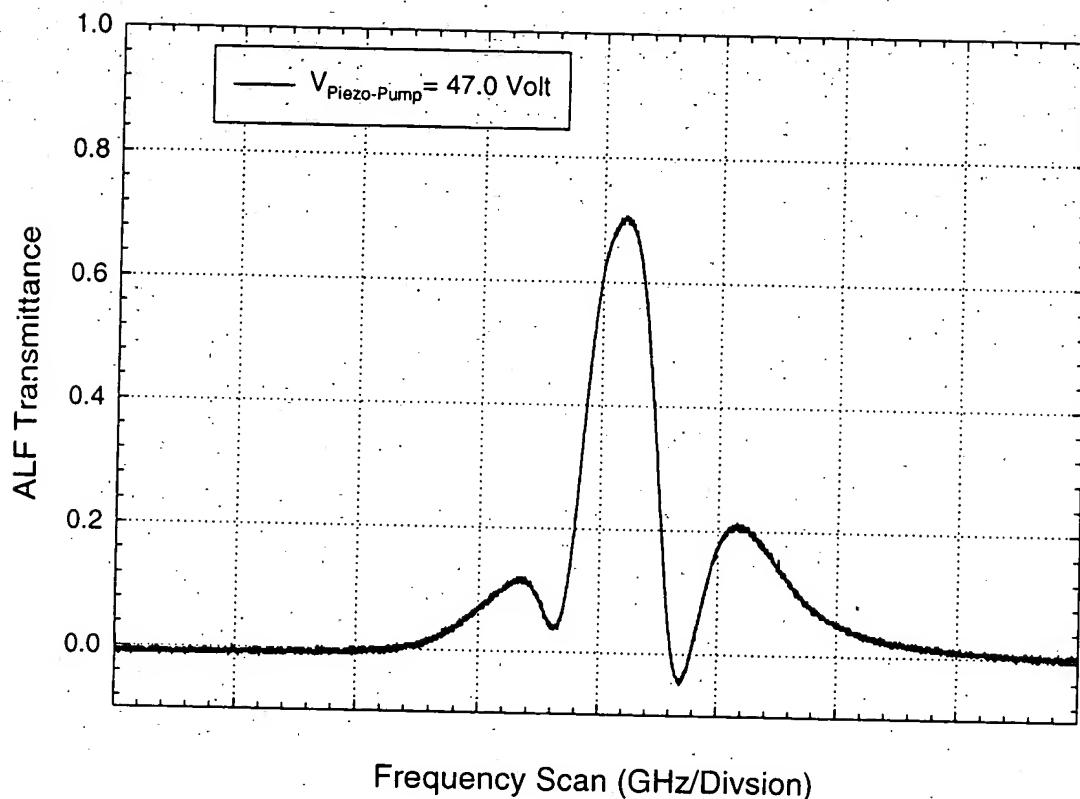


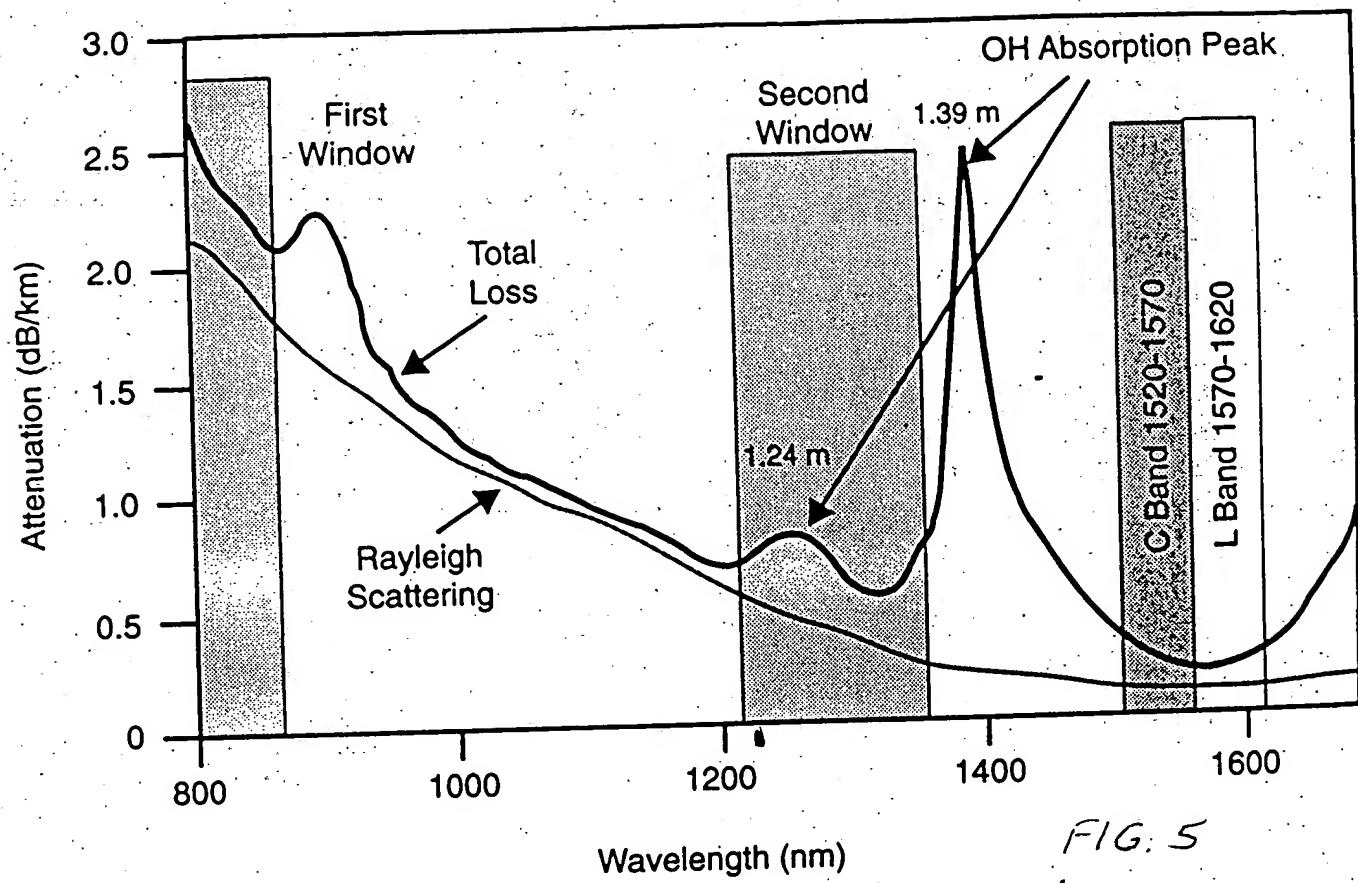
FIG. 3E

Rb Atomic Line Filter at 1529.3 nm



Rb vapor temperature: 120 °C
Rb cell length: 1 cm
Magnetic field Strength: 140 Gauss
Pump laser Wavelength: 780.24 nm (vacuum)
Pump power: 10.8 mW
Pump laser effective area: 0.778 mm²

FIG. 4



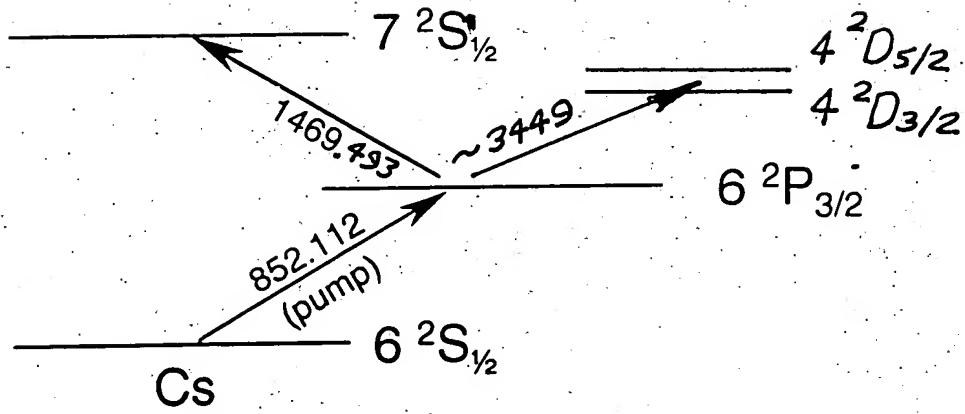


FIG. 6A

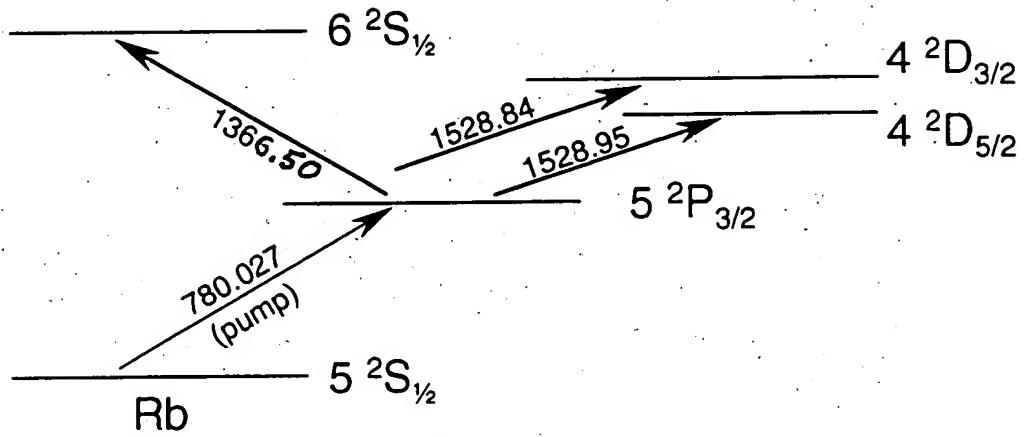


FIG. 6B

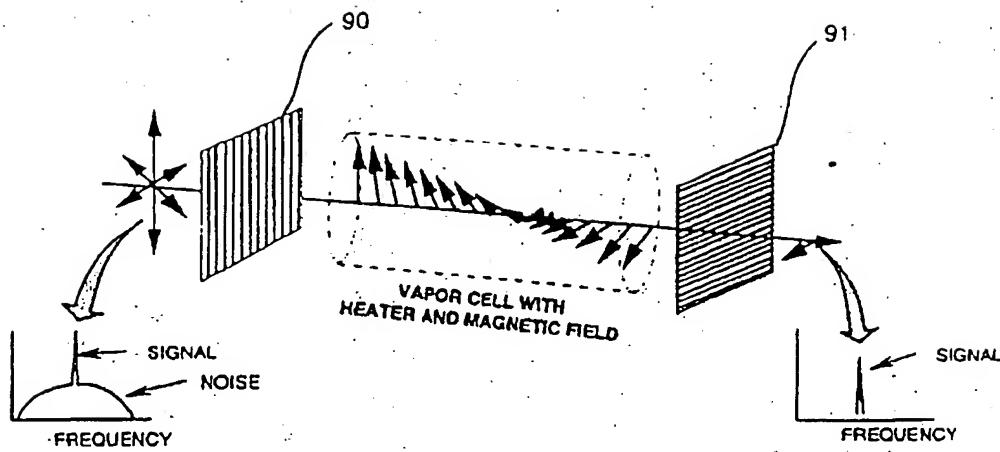


Fig. 7B

Fig. 7A

Fig. 7C

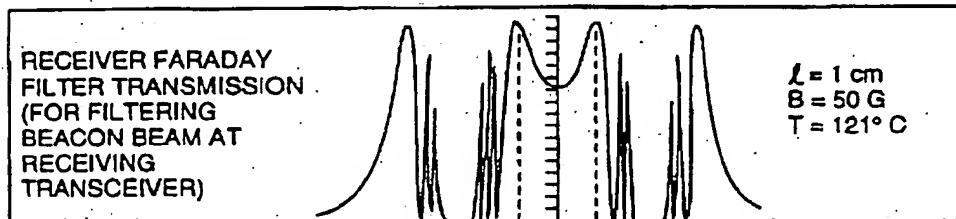


Fig. 8A

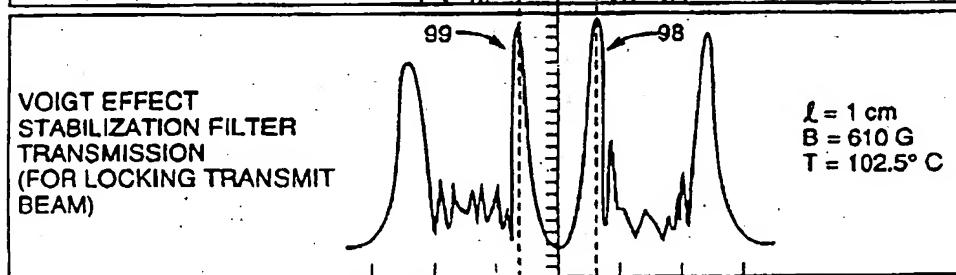


Fig. 8B

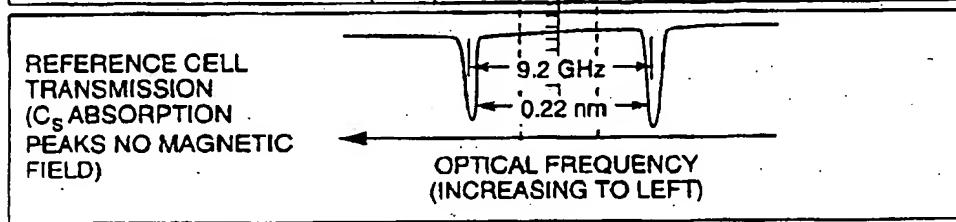


Fig. 8C

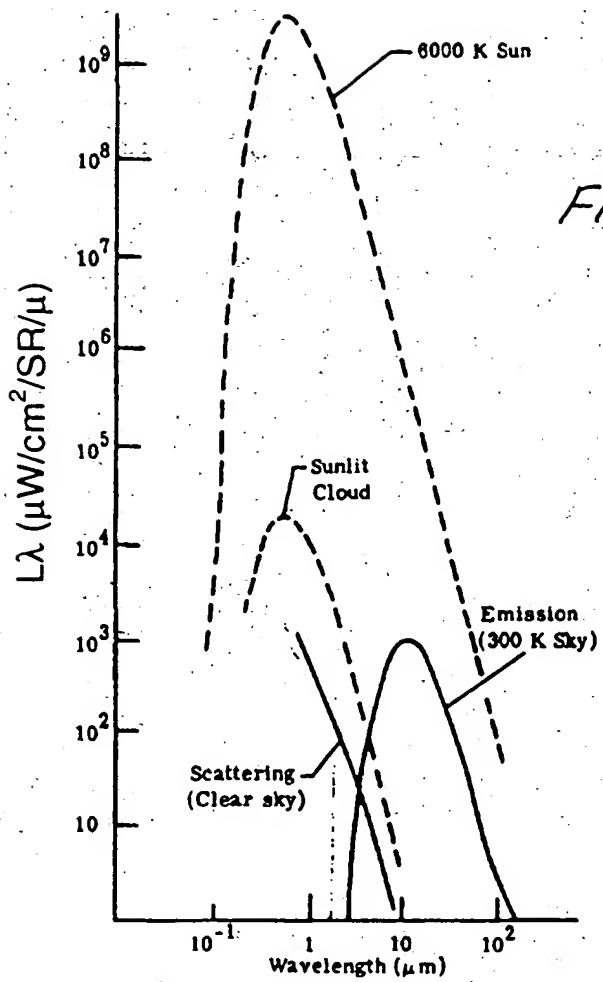


FIG. 8

FIG. 9

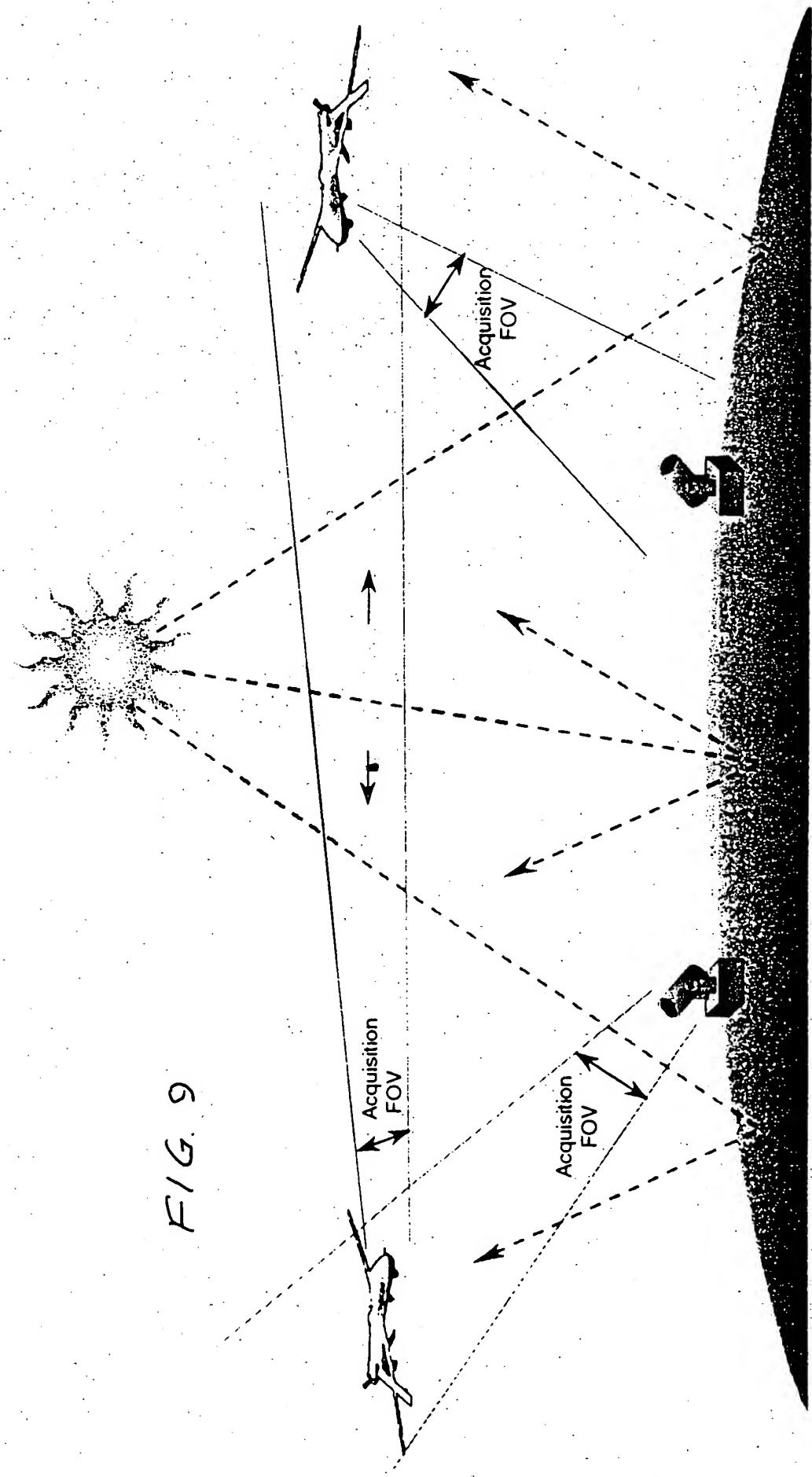


FIG.10A

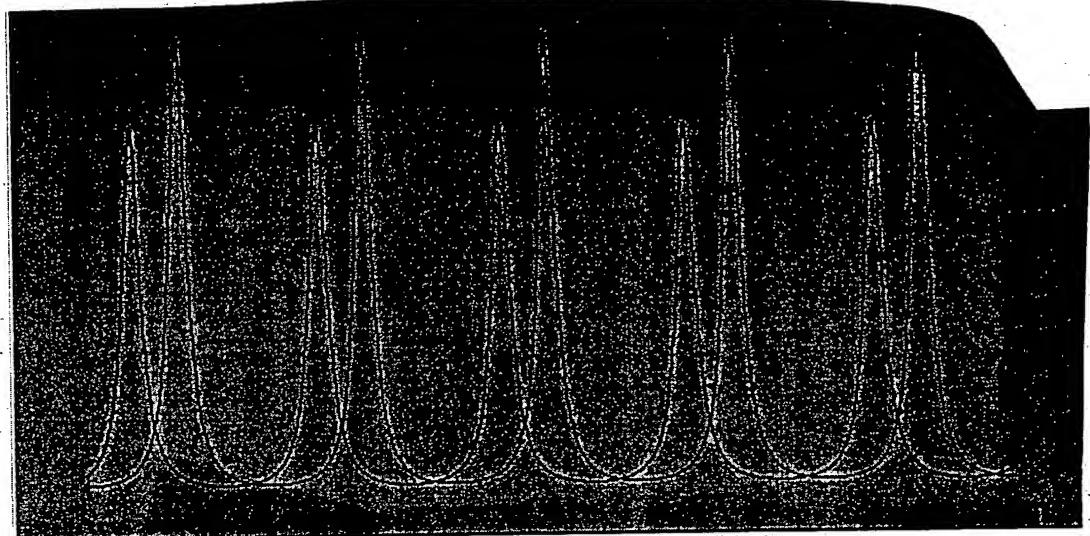


FIG.10B

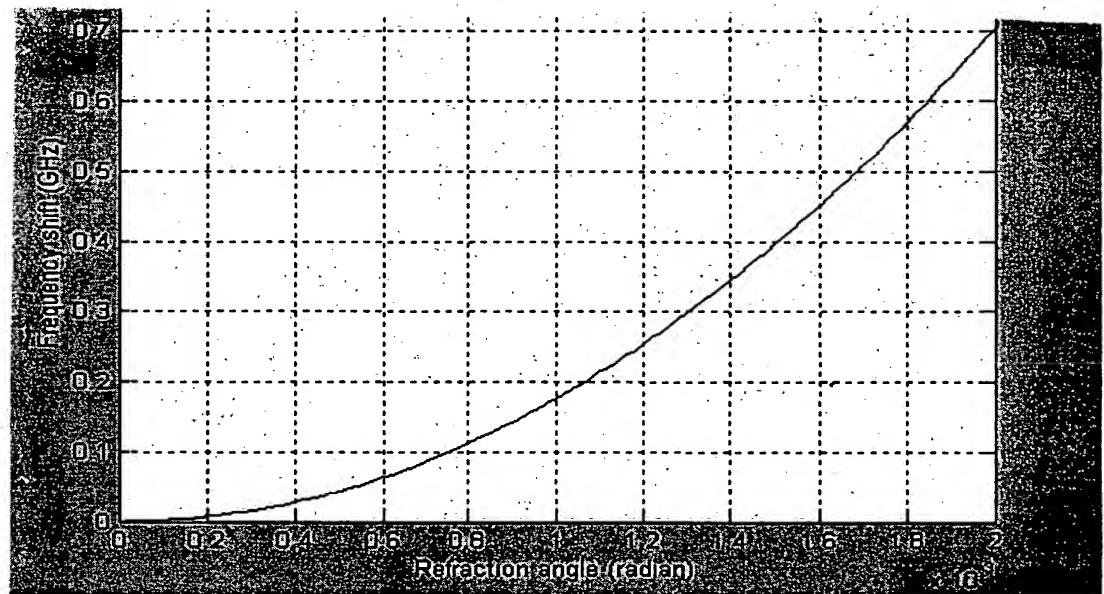
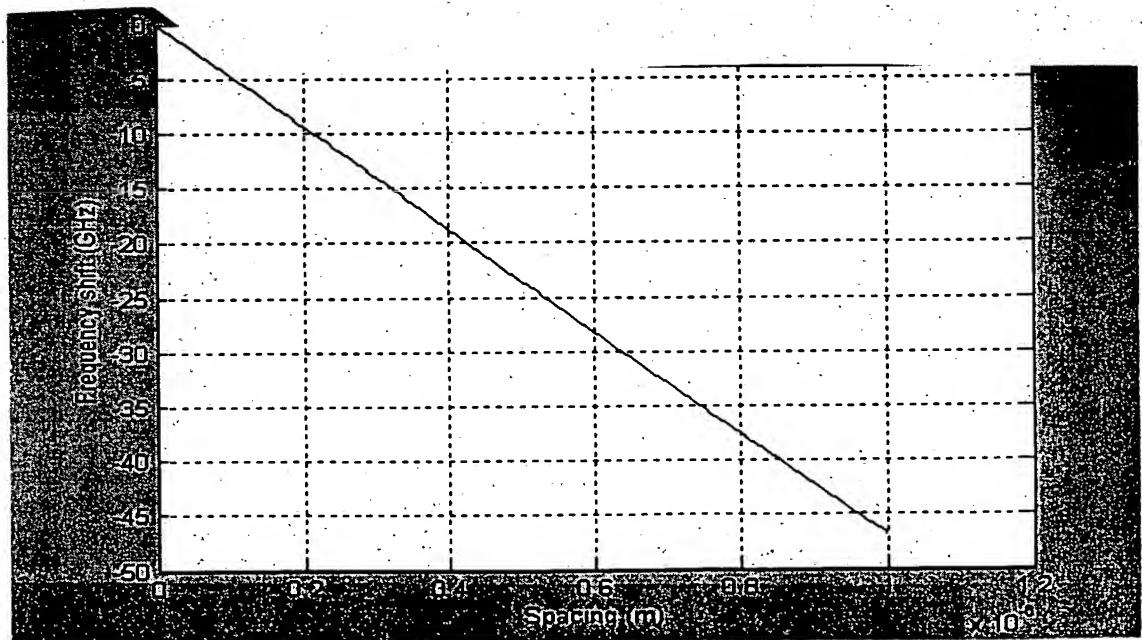


FIG.10C



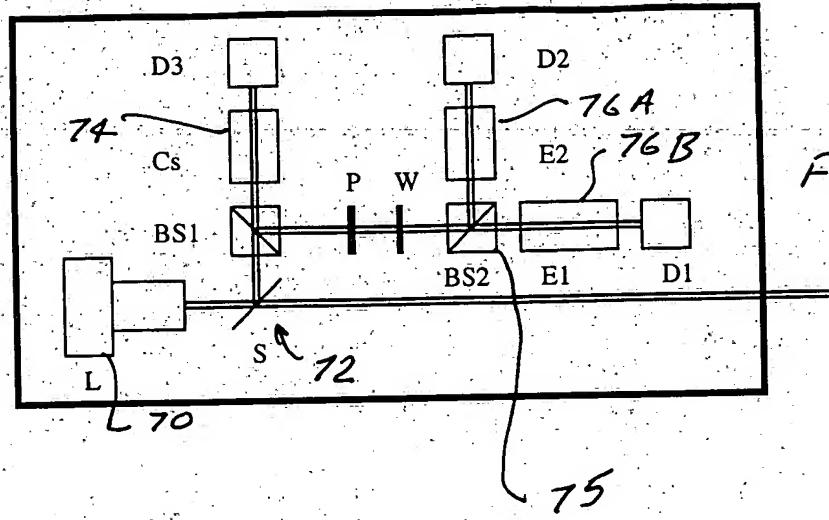


FIG. 100